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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,925	08/31/2001	Olga Valerievna Koshkina	STL3054	2253

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EXAMINER

KAPADIA, VARSHA A

ART UNIT PAPER NUMBER

2627

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/944,925	KOSHKINA ET AL.	
	Examiner	Art Unit	
	Varsha A. Kapadia	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,8-13,17 and 25-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,8-13,17 and 25-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detail Action

This office action is responsive to the amendment filed on 04/24/06.

Rejection Under 35 U.S.C. 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4,8, 10-12, 17, 25-30, 32-34, 36,38 and 40-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimote et al (5,212,677).

With regards to claims 1, 25, 32 and 43 Shimote et al disclose a method/apparatus comprising imaging a characteristic size (see col. 6 lines 10-15 and col.10 lines 14-16) of a defective region of a data storage medium by combining a plurality of data readback signals received from different tracks adjacent the defective region (see col. 9 lines 3-24, col.9 line 50 to col. 10 line 2,abstract and fig.18-19 and disclosure thereof).

With regards to claims 2, 26-27, and 33 Shimote et al disclose step/element of categorizing the defective region by comparing characteristic size of the defective region to a plurality of predefined category (see col.8 lines 45 to col.9 line 15 and fig.6 elements 3, 7,8 and disclosure thereof).

With regards to claims 4, 10, 28, 34, 36 and 40, Shimote et al disclose categorizing step/element comprising identifying defective region as likely being characteristic of a scratch/corrosion (see fig. 6 elements 3, 7-8, fig. 7 and disclosure thereof).

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With regards to claims 8, 29 and 38 Shimote et al disclose imaging step/element comprises an array of data points each having independent coordinate X and Y with respect to storage media (see col.6 lines 10-15).

With regards to claims 11 and 12, Shimote et al discloses step/element of modifying a list of bad sectors and retaining the modified list in the data storage apparatus (see col.11 lines 41 to 64).

With regards to claims 17 and 30, Shimote et al disclose image step comprises receiving all of the plurality of readback signals from the transducer head of a sealed data storage apparatus in which medium is rotated (See fig. 6 element 2 and disclosure thereof).

With regards to claim 41, Shimote et al disclose memory storing a location of the defective region (see abstract).

With regards to claim 42, Shimote et al disclose a data storage device (Se fig. 6 element 2 and disclosure thereof).

Rejection Under 35 U.S.C. 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimote et al in view of Bang (6,151,180).

With regards to claims 5 and 37, Shimote et al discloses the invention as discussed above in this office action, but fails to further specify that the defective region is unreliable if a ratio defined by a size of a portion of the defective region with a less than expected readback signal strength...

However, such is disclosed by Bang (see col.3 lines 33-67).

It would have been obvious to one of ordinary skill in the art at the time this invention was made to modify Shimote et al with the above teaching from Bang in order to provide a storage apparatus having a capability of accurately determining which specific portion of the surface is unreliable and hence to increase the reliability of apparatus.

Claims 9 and 39 rejected under 35 U.S.C. 103(a) as being unpatentable over Shimote et al in view of Abraham et al (5,527,110).

With regards to claims 9 and 39, Shimote et al disclose imaging step/element comprises an array of data points each having independent coordinate X and Y but fails to further specify that the X and Y coordinate is associated with a corresponding Z coordinate as claimed.

However, Abraham et al disclose such on col.5 14-34, wherein display of the three dimensional data includes X and Y coordinate associated with a corresponding Z coordinate relating to a strength of the readback signal.

It would have been obvious to one of ordinary skill in the art at the time this invention was made to modify Shimote et al with the above teaching from Abraham et al in order to provide a storage apparatus having a capability of representing array of data point wherein each X and Y coordinate is associated with a corresponding Z coordinate to provide a display of the three dimensional data.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimote et al in view of Smith (6,384,995).

With regards to claim 13, Shimote et al disclose step of assigning a value to each of the defective regions according to the categorizing step as described above in this office action, but fails to further specify step of reworking the data storage medium if an aggregation of the assigned value exceed a predetermined threshold.

Smith further discloses steps of assigning a value to each of the defective region and reworking the data storage medium if an aggregation of the assigned values exceeds a predetermined threshold (see abstract and col.10 lines 51-59).

It would have been obvious to one of ordinary skilled in the art at the time this invention was made to modify the disclosure of Shimote et al with the above teachings from Smith in order to provide a capability of reworking the data storage medium if an aggregation of the assigned values exceeds a predetermined threshold in order to prevent the loss of data and enhance the reliability of the apparatus.

Claims 31 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimote et al.

With regards to claims 31 and 35, Shimote et al disclose the invention as described above in this office action. Claims 31 and 35 further specify the respective dimension of the scratch, i.e. "... a length is greater than a width by a factor of about 2.5". However, defining such dimension is considered as routine engineering capability and no unexpected results are to occur.

It would have been obvious to one of ordinary skilled in the art at the time this invention was made to modify the disclosure of Shimote et al by specifying a dimension of the scratch i.e.

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length is greater than a width by a factor of about 2.5 since such dimensions are considered as routine engineering capability and no unexpected are results are to occur.

Response To Remarks

Applicant's arguments with respect to claims 1-2, 4-5, 8-13, 17 and 25-43 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Varsha A. Kapadia whose telephone number is (571) 272-7557. The examiner can normally be reached on Mon Tue and Thurs. from 6:30 AM to 2:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on 571 272 4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


VK


ANDREA WELLINGTON
SUPERVISORY PATENT EXAMINER